

## REMARKS

In accordance with the foregoing, the specification, the drawings, and claims 1-11 and 27-31 have been amended, and new claims 36 and 37 have been added. Claims 1-11, 27-31, 36, and 37 are pending, with claims 1 and 27 being independent. No new matter is presented in this Amendment.

### Request for Consideration of Information Disclosure Statement

An Information Disclosure Statement was filed on December 13, 2007, and it is respectfully requested that this Information Disclosure Statement be considered.

### Request for Indication That References Cited in Related Applications Have Been Considered

The Examiner has cited the following fourteen references in one or both of related Application Nos. 11/600,032 and 11/600,034, both of which are continuing applications of the present application:

US 4,229,808  
US 5,596,564  
US 5,737,287  
US 6,249,896  
US 6,339,627  
US 6,470,142  
US 6,581,167  
US 6,600,431  
US 6,704,262  
US 6,788,753  
US 6,816,447  
US 6,996,048  
US 7,006,760  
US 7,120,105

However, the Examiner has not cited these fourteen references in the present application, and 37 CFR 1.97 and 1.98 and MPEP 609 do not specifically provide a procedure for an applicant to cite references cited by an Examiner in a related U.S. application. Accordingly, it is respectfully requested that the Examiner indicate that these fourteen references have been considered in the present application. These fourteen references are listed on the attached List of References Cited by Applicant for the Examiner's convenience in indicating that these references have been considered in the present application.

Drawing Objections, Drawing Amendments, and Specification Amendments

The drawings have been objected to under 37 CFR 1.83(a), with the Examiner stating as follows:

The drawings must show every feature of the invention specified in the claims. Therefore, the code limitations/constraints as further defined by claims 1/27, i.e., that of the third and fourth synch identifications are not identical, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Attached hereto are two new sheets of drawings containing new FIGS. 5 and 6 that show the features of claims 1 and 27 referred to by the Examiner. FIG. 5 is based on Table 1 on page 5 of the specification, and FIG. 6 is based on Table 2 on page 6 of the specification as amended in this Amendment, and includes additional language relating the items shown in Tables 1 and 2 to the language of the claims. The Brief Description of the Drawings in the specification has been amended to refer to new FIGS. 5 and 6, and new paragraphs [0029.1] and [0029.2] describing new FIGS. 5 and 6 in terms that are consistent with the language of the claims have been added to the specification.

The undersigned attorney briefly discussed the applicants' intention to add new figures based on Tables 1 and 2 to the drawings with Examiner Aristotelis M. Psitos during a personal interview conducted on January 3, 2008, in connection with related Application No. 11/600,034, which is a continuation of the present application.

Also attached hereto is a replacement sheet of drawings containing FIG. 3 that replaces the replacement sheet of drawings containing FIG. 3 submitted with the Amendment of October 12, 2007. FIG. 3 in the replacement sheet of drawings attached hereto is identical to FIG. 3 as

originally filed on September 30, 2003, except that the direction of the hatching in the first occurrence of the sync pattern 23 in the second additional data area D has been changed to match the direction of the hatching in the first occurrence of the sync pattern 23 in the first additional data area D in FIG. 3, and the direction of the first occurrence of the sync pattern 23 in the additional data area D in FIG. 2. Paragraphs [0021] and [0022] of the specification have been amended to be consistent with FIG. 3 in the replacement sheet of drawings attached hereto.

Table 2 on page 6 has been amended to correct a typographical error by changing the sync ID for Sync No. 7 from "010 001 000 1" to "001 001 000 1" so that the sync patterns for the additional data area (Sync Nos. 7 and 8) will be different from the sync patterns for the user data area (Sync Nos. 0 through 6) to be consistent with original paragraph [0026] on page 6, which has not been amended since the present application was filed and reads as follows:

**[0026]** As shown in Tables 1 and 2, the sync data in the additional data D area has different patterns as compared to the sync data in the user data area C. In other words, the sync IDs of the second sync patterns 23 have sync patterns not used as the first sync patterns 13. Therefore, the additional data areas D can be managed and can be distinctly differentiated from the user data areas C.

The amendment to Table 2 is also consistent with original claim 1, which reads as follows:

1. An information storage medium for use with a recording and/or reproducing apparatus comprising:
  - a user data area in which user data is recorded and having first sync patterns; and
  - an additional data area located in at least one of areas before and after the user data area and having second sync patterns,wherein the second sync patterns are different from first sync patterns such that the recording and/or reproducing apparatus distinguishes between the user area and the additional data area according to the first and second sync patterns.

Other changes to the specification have been made to correct errors and improve its form.

For at least the foregoing reasons, it is respectfully requested that the objection to the drawings under 37 CFR 1.83(a) be withdrawn.

#### Claim Objections

Claims 11 and 28-31 have been objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim, with the Examiner stating "[a]pplicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form." This objection is traversed.

In explaining the objection, the Examiner states as follows:

In particular:

a) With respect to claim 11, 32,33 this claim adds no further structural limitations to the storage medium – i.e., no further product limitations.

Applicants' attention is also drawn to the 112 rejections as expanded upon below. This claim is drawn to desired results, and NOT TO ANY PRODUCT LIMITATION.

b) Claims 28- 31 and 34 and 34 add no further apparatus limitations. These claims are drawn to the desired pattern found/contained on the disc. NO further elements are recited in order for any such pattern to be recognized. Furthermore, the size limitations are not drawn to apparatus elements.

It appears that the Examiner meant to refer to "[c]laims 28-31, 34, and 35," rather than to "[c]laims 28- 31 and 34 and 34." In any event, claims 32-35 were canceled in the Amendment of October 12, 2007, to which the Office Action of November 29, 2007, is responsive.

37 CFR 1.75(c) reads as follows:

(c) One or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application. Any dependent claim which refers to more than one other claim ("multiple dependent claim") shall refer to such other claims in the alternative only. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. For fee calculation purposes under § 1.16, a multiple dependent claim will be considered to be that number of claims to which direct reference is made therein. For fee calculation

purposes also, any claim depending from a multiple dependent claim will be considered to be that number of claims to which direct reference is made in that multiple dependent claim. In addition to the other filing fees, any original application which is filed with, or is amended to include, multiple dependent claims must have paid therein the fee set forth in § 1.16(j). Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of each of the particular claims in relation to which it is being considered.

However, it is not seen where 37 CFR 1.75(c) provide any basis whatsoever for the Examiner's position that dependent claims 11 and 28-31 do not further limit independent claims 1 and 27 from which they directly or indirectly depend because claim 11 does not recite any further structural or product limitations, and claims 28-31 do not recite any further apparatus limitations.

The undersigned attorney briefly discussed this issue with Examiner Aristotelis M. Psitos during the personal interview conducted on January 3, 2008, in connection with related Application No. 11/600,034 referred to above in the discussion of the objection to the drawings under 37 CFR 1.83(a). The Examiner explained that this objection is based in part on a discussion the Examiner had with a TQAS (Training Quality Assurance Specialist) in Technology Center 2600 about the rejection of claims 1-11 under 35 USC 101 discussed below, during which the issue of whether or not certain elements in claim 1 should be interpreted as structural limitations was discussed.

It is noted that 37 CFR 1.75(c) was promulgated to interpret 35 USC 112, fourth paragraph, which reads as follows:

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

The Examiner's attention is directed to MPEP 608.01(n)(III), which provides as follows on MPEP page 600-91:

The test as to whether a claim is a proper dependent claim is that it shall include every limitation of the claim from which it depends (35 U.S.C. 112, fourth paragraph) or in other words that it

shall not conceivably be infringed by anything which would not also infringe the basic claim.

A dependent claim does not lack compliance with 35 U.S.C. 112, fourth paragraph, simply because there is a question as to (1) the significance of the further limitation added by the dependent claim, or (2) whether the further limitation in fact changes the scope of the dependent claim from that of the claim from which it depends. The test for a proper dependent claim under the fourth paragraph of 35 U.S.C. 112 is whether the dependent claim includes every limitation of the claim from which it depends. The test is not one of whether the claims differ in scope.

Here, it is submitted that dependent claims 11 and 28-31 do in fact include every limitation of independent claims 1 and 27 from which they directly or indirectly depend, and thus are in fact proper dependent claims under 35 USC 112, fourth paragraph, pursuant to the above test in MPEP 608.01(n)(III), and this are necessarily also proper dependent claims under 37 CFR 1.75(c), regardless of the Examiner's opinion of the significance of the further limitations added by dependent claims 11 and 28-31.

For at least the foregoing reasons, it is respectfully requested that the objection to claims 11 and 28-31 under 37 CFR 1.75(c) be withdrawn.

#### Claim Rejections Under 35 USC 101

Claims 1-11 have been rejected under 35 USC 101 as being directed to non-statutory subject matter. This rejection is respectfully traversed.

In explaining the rejection, the Examiner states as follows:

These claims are attempting to define non-descriptive functional subject matter, however, they fail to satisfy the requirements of 35 U.S.C. 101 – see MPEP section 2106 under the section (1) – Non-statutory subject matter. In this analysis, the wherein clause of claim (s) 1 and 23 are interpreted as the non-descriptive functional subject matter. The remaining dependent claims fail to make these claims statutory and hence fall accordingly.

This explanation of the rejection is identical to the explanation of the rejection of claims 1-11 and 23-26 under 35 USC 101 set forth on page 3 of the first Office Action of July 14, 2006.

With respect to claim 23 referred to by the Examiner, claim 23 was canceled in the Amendment After Final Rejection of April 3, 2007, together with claims 24-26.

With respect to the Examiner's statement "see MPEP section 2106 under the section (1) – Non-statutory subject matter," the Examiner is apparently referring to MPEP 2106(IV)(B)(1) entitled "Nonstatutory Subject Matter" which last appeared in MPEP 2106 on pages 2100-11 to 2100-14 of MPEP, 8th Edition, Revision 3, August 2005. However, this section was deleted from MPEP 2106 in MPEP, 8th Edition, Revision 5, August 2006, which was issued after the first Office Action of July 14, 2006, was issued, and this section does not appear in MPEP 2106 in MPEP, 8th Edition, Revision 6, September 2007, which is the current version of the MPEP. Thus, the rejection of claims 1-11 is based on a section of MPEP 2106 that is no longer in existence, and is therefore improper. It is noted that MPEP, 8th Edition, Revision 6, September 2007, contains a section MPEP 2106.01 entitled "Computer-Related Nonstatutory Subject Matter." The Examiner may wish to review this MPEP section and rely on it if appropriate in the next Office Action if he repeats the rejection of claims 1-11 under 35 USC 101.

With respect to the Examiner's reference to "non-descriptive functional subject matter," it is noted that this term does not appear in former MPEP 2106(IV)(B)(1) or in current MPEP 2106.01, which refer to "functional descriptive material" and "nonfunctional descriptive material."

It will be presumed for the purposes of this discussion that the Examiner considers independent claim 1 to recite nonfunctional descriptive material.

MPEP 2106.1 states provides as follows:

When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)(discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency)

....

Here, it is submitted that the "second sync patterns that are different from the first sync patterns and that enable the apparatus to distinguish the additional data area from the user data area when the computer-readable medium is used with the apparatus" now recited in independent claim 1 are in fact functional descriptive material because they enable the

apparatus to distinguish the additional data area from the user data area when the computer-readable medium is used with the apparatus.

Furthermore, since claim 1 now recites "a computer-readable medium for use with a recording and/or reproducing apparatus, the computer-readable medium comprising: . . . an additional data area located before and/or after the user data area, and comprising second sync patterns that are different from the first sync patterns and that enable the apparatus to distinguish the additional data area from the user data area when the computer-readable medium is used with the apparatus," it is submitted that the second sync patterns are structurally and functionally interrelated to the computer-readable medium. Accordingly, it is submitted that the computer-readable medium recited in claim 1 is statutory under 35 USC 101 since use of technology permits the function of the second sync patterns to be realized when the computer-readable medium is used with the apparatus.

In response to similar arguments presented in the Amendment After Final Rejection of April 3, 2007, and the Amendment of October 12, 2007, with respect to claims 1-11 that then recited an "information storage medium," rather than a "computer-readable medium" as now recited in claims 1-11, the Examiner states as follows in the Office Action of November 30, 2007:

Applicants' arguments filed 4/3/07 have been fully considered but they are not persuasive.

Applicants' claims are not drawn to the argued "computer readable medium".

Applicants' continue to argue that these claims are drawn to a "computer readable medium". However, SUCH IS NOT RECITED IN THE CLAIM LANGUAGE. – Positive statements/language as to such is REQUIRED.

Thus, the Examiner's position appears to be that the previous versions of claims 1-11 were non-statutory under 35 USC 101 at least in part because they recited an "information storage medium," rather than a "computer-readable medium."

The undersigned attorney briefly discussed this issue with Examiner Aristotelis M. Psitos during the personal interview conducted on January 3, 2008, in connection with related Application No. 11/600,034 referred to above in the discussion of the objection to the drawings under 37 CFR 1.83(a). The Examiner explained that he had been informed by the TQAS (Training Quality Assurance Specialist) in Technology Center 2600 referred to above in the



discussion of the objection to the claims under 37 CFR 1.75(c) that since claims 1-11 do not contain the exact words "computer-readable medium," then the Examiner was required to reject claims 1-11 under 35 USC 101 as being non-statutory. However, it is submitted that the position of the TQAS is not supported by law.

It is submitted that nothing whatsoever in MPEP 2106.01 requires that a claim reciting functional descriptive material must recite that the functional descriptive material is recorded on a "computer-readable medium" to be statutory under 35 USC 101. Rather, MPEP 2106.01 states that "[w]hen functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases," citing *In re Lowry*, 32 F.3d 1579, USPQ2d 1031 (Fed. Cir. 1994). In *Lowry*, the Court held that a claim that recited "[a] memory for storing data for access by an application program being executed on a data processing system, comprising: a data structure stored in said memory" was statutory under 35 USC 101, and that the "data structure" must be given patentable weight.

MPEP 2106.01 also cites *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), in which the Court held that a claim reciting "[a] machine having a memory which contains data representing a bubble hierarchy generated by the method of any of Claims 1 through 4" was statutory under 35 USC 101.

In *In re Beauregard*, 53 F.3d 1583, 35 USPQ2d 1383 (Fed. Cir. 1995), the Court stated that "[t]he Commissioner [of Patents and Trademarks] now states 'that computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. § 101 and must be examined under 35 §§ U.S.C. 102 and 103.' "

At issue in *Beauregard* was Application No. 07/521,858, which issued as U.S. Patent No. 5,710,578 on January 20, 1998, and contains claims that recite "[a]n article of manufacture comprising: a computer usable medium having computer readable program code means embodied therein" and similar claims; "[a] computer program product comprising: a computer usable medium having computer readable program code means embodied in said medium" and similar claims; and "[a] program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine."

In *In re Nuijten*, 500 F.3d 1346, 84 USPQ2d 1495 (Fed. Cir. 2007), the Court pointed out that in *Ex parte Nuijten*, 84 USPQ2d 1335 (Bd. Pat. App. & Inter. 1996), the Board of Patent

Appeals and Interferences had found that "[t]he storage medium in claim 15 nominally puts the claim into the statutory category of a 'manufacture' " and had reversed the Examiner's rejection of claim 15 under 35 USC 101. Claim 15 recited "[a] storage medium having stored thereon a signal with embedded supplemental data."

For at least the foregoing reasons, it is submitted that a claim reciting functional descriptive material is not required to recite that the functional descriptive material is recorded on a "computer-readable medium" to be statutory under 35 USC 101 as alleged by the TQAS with whom the Examiner spoke. It is submitted that the "information storage medium" previously recited in claims 1-11 is but one of many examples of the "some computer-readable medium" referred to in MPEP 2106.01 that include the "memory" in the *Lowry* and *Warmerdam* decisions; the "tangible medium" in the *Beauregard* decision; the "computer usable medium" and the "program storage device" in the *Beauregard* patent; and the "storage medium" in the *Nuijten* decisions.

In any event, the point is moot since claims 1-11 now recite a "computer-readable medium."

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 1-11 under 35 USC 101 as being directed to non-statutory subject matter be withdrawn.

#### Claim Rejections Under 35 USC 112

##### Rejection 1

Claims 1-11 and 27-31 have been rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

In explaining the rejection, the Examiner states as follows:

The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, as amended on 5/21/07 the independent claims recite:

".... A third sync body and a third sync identification, and a fourth sync pattern having a fourth sync pattern having a further sync body and a fourth sync identification, and the

third sync identification is different from the fourth sync identification." .

However, the examiner cannot readily find support for such language in the specification as originally filed. Further elaboration is respectfully required.

As an initial matter, it is noted that independent claims 1 and 27 do not recite "a fourth sync pattern having a fourth sync pattern having a further sync body and a fourth sync identification" as alleged by the Examiner, but recite "a fourth sync pattern having a fourth sync body and a fourth sync identification."

Table 1 on page 5 of the specification shows a third sync pattern (Sync No. 9) having a third sync body (001 001 010 000 000 010) and a third sync identification (100 101), and a fourth sync pattern (Sync No. 10) having a fourth sync body (001 001 010 000 000 010) and a fourth sync identification (101 001), the third sync identification (100 101) being different from the fourth sync identification (101 001).

Table 2 on page 6 of the specification as amended in this Amendment shows a third sync pattern (Sync No. 7) having a third sync body (100 001 000 000 000 000 010 0) and a third sync identification (001 001 000 1), and a fourth sync pattern (Sync No. 8) having a fourth sync body (100 001 000 000 000 000 010 0) and a fourth sync identification (010 010 010 0), the third sync identification (001 001 000 1) being different from the fourth sync identification (010 010 010 0).

Since Tables 1 and 2 of the specification show the features of claims 1 and 27 referred to by the Examiner, it is submitted that the subject matter of claims 1 and 27 is in fact described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Also, new paragraphs [0029.1] and [0029.2] that have been added to the specification to describe new FIGS. 5 and 6 provide explicit support for the terms "third sync pattern" and "fourth sync pattern."

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 1-11 and 27-31 under 35 USC 112, first paragraph, as failing to comply with the written description requirement be withdrawn.

## Rejection 2

Claims 1-11 have been rejected under 35 USC 112, second paragraph, as failing to set forth the subject matter that the applicants regard as their invention. This rejection is respectfully traversed.

In explaining the rejection, the Examiner states as follows:

Evidence that the claims fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed 10/12/07. In that paper, applicant has stated that the claims are drawn to structural and functional interrelationships between the data structure and the computer software and hardware components that permit the data structure's functionality. This statement indicates that the invention is different from what is defined in the claim(s) because none of the above can be interpreted/inferred from the claimed invention.

However, as discussed above in connection with the rejection under 35 USC 101, since claim 1 now recites "a computer-readable medium for use with a recording and/or reproducing apparatus, the computer-readable medium comprising: . . . an additional data area located before and/or after the user data area, and comprising second sync patterns that are different from the first sync patterns and that enable the apparatus to distinguish the additional data area from the user data area when the computer-readable medium is used with the apparatus," it is submitted that the second sync patterns are in fact structurally and functionally interrelated to the computer-readable medium, and it is submitted that the use of technology permits the function of the second sync patterns to be realized when the computer-readable medium is used with the apparatus.

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 1-11 under 35 USC 112, second paragraph, be withdrawn.

## Claim Rejections Under 35 USC 102

Claims 1, 2, 3, 5, 6, 9, 10, and 27-29 have been rejected under 35 USC 102(b) as being anticipated by either Fujimoto et al. (Fujimoto) (U.S. Patent No. 6,191,903) or Sako et al. (Sako) (U.S. Patent No. 6,005,839). This rejection is respectfully traversed.

As an initial matter, in the explanation of this rejection, the Examiner states "[w]ith respect to claims 2, 3 6,7 and 9 and 10 . . . ." However, it appears from the statement of the rejection and the Examiner's comments that the Examiner actually intended to say "[w]ith respect to claims 2, 3, 5,6, 9, and 10 . . . ." It is respectfully requested that the Examiner confirm this or clarify what he intended to say if he repeats the rejection.

It is submitted that Fujimoto and Sako do not disclose "a user data area comprising user data and first sync patterns; and an additional data area located before and/or after the user data area, and comprising second sync patterns that are different from the first sync patterns and that enable the apparatus to distinguish the additional data area from the user data area when the computer-readable medium is used with the apparatus; wherein: the second sync patterns comprise: a third sync pattern comprising a third sync body and a third sync identification, and a fourth sync pattern comprising a fourth sync body and a fourth sync identification, and the third sync identification is different from the fourth sync identification" as now recited in independent claim 1, or the similar features now recited in independent claim 27, which recites "an information storage medium," rather than "a computer-readable medium" as is recited in claim 1.

It is noted that the Examiner did not identify any specific elements in Fujimoto and Sako that the Examiner considers to be a "user data area" and an "additional data area" as recited in claims 1 and 27 in explaining the rejection, which makes it impossible for the applicants to respond to the rejection without speculating about how the Examiner is interpreting Fujimoto and Sako.

Accordingly, should the Examiner repeat this rejection, it is respectfully requested that the Examiner identify the specific elements in Fujimoto and Sako that the Examiner considers to be a "user data area" and an "additional data area" as recited in claims 1 and 27.

#### Fujimoto

FIGS. 1 and 7-9 of Fujimoto show one sector of 26 frames of AV data having different sync patterns SY<sub>n</sub>, which may arguably be considered to be a "user data area" as recited in claims 1 and 27. However, FIGS. 1 and 7-9 do not show anything that may arguably be considered to be an "additional data area" as recited in claims 1 and 27.

FIG. 10 of Fujimoto shows one cluster containing a preamble having different sync patterns SY1, SY2, SY4, and SY6, 16 sectors having different sync patterns SY0 to SY5, and SY6, and a postamble having the same sync patterns SY6. The 16 sectors store AV data, and the preamble and the postamble store predetermined data that is not AV data. Assuming *arguendo* that the 16 sectors may arguably be considered to be a "user data area" as recited in claims 1 and 27, and that each of the preamble and the postamble may arguably be considered to be an "additional data area" as recited in claims 1 and 27, it is submitted that the 16 sectors and the preamble do not provide the feature "second sync patterns that are different from the first sync patterns" as recited in claims 1 and 27 because the sync patterns SY1, SY2, and SY4 are used in both the 16 sectors and the preamble. Also, it is submitted that the 16 sectors and the postamble do not provide the feature "wherein: the second sync patterns comprise: a third sync pattern comprising a third sync body and a third sync identification, and a fourth sync pattern comprising a fourth sync body and a fourth sync identification, and the third sync identification is different from the fourth sync identification" recited in claims 1 and 27 because all of the sync patterns in the postamble are the same sync pattern SY6.

FIG. 11 of Fujimoto shows one cluster containing a preamble having different sync patterns SY1, SY2, SY5, and SY6, 16 sectors having different sync patterns SY0 to SY6 (although it is unclear if SY6 is actually used in the 16 sectors in light of the description of FIG. 11 in column 13, line 35, through column 14, line 22, of Fujimoto), and a postamble having the same sync patterns SY6. The 16 sectors store AV data, and the preamble and the postamble store predetermined data that is not AV data. Assuming *arguendo* that the 16 sectors may arguably be considered to be a "user data area" as recited in claims 1 and 27, and that each of the preamble and the postamble may arguably be considered to be an "additional data area" as recited in claims 1 and 27, it is submitted that the 16 sectors and the preamble do not provide the feature "second sync patterns that are different from the first sync patterns" as recited in claims 1 and 27 because the sync patterns SY1, SY2, and SY5, and perhaps the sync pattern SY6, are used in both the 16 sectors and the preamble. Also, it is submitted that the 16 sectors and the preamble do not provide the feature "second sync patterns that are different from the first sync patterns" as recited in claims 1 and 27 because the sync pattern SY6 is used in both the 16 sectors and postamble as shown in FIG. 11. Assuming *arguendo* that that the sync pattern SY6 is not actually used in the 16 sectors as shown in FIG. 11, it is submitted that the 16 sectors and the postamble do not provide the feature "wherein: the second sync patterns

comprise: a third sync pattern comprising a third sync body and a third sync identification, and a fourth sync pattern comprising a fourth sync body and a fourth sync identification, and the third sync identification is different from the fourth sync identification" recited in claims 1 and 27 because all of the sync patterns in the postamble are the same sync pattern SY6.

FIG. 15 of Fujimoto shows one cluster containing a preamble, 16 sectors, and a postamble all having sync patterns SYNC. The 16 sectors store AV data, and the preamble and the postamble store predetermined data that is not AV data. Assuming *arguendo* that the 16 sectors may arguably be considered to be a "user data area" as recited in claims 1 and 27, and that each of the preamble and the postamble may arguably be considered to be an "additional data area" as recited in claims 1 and 27, FIG. 15 does not show any details of the sync patterns SYNC, and thus does not show "second sync patterns that are different from the first sync patterns" or "wherein: the second sync patterns comprise: a third sync pattern comprising a third sync body and a third sync identification, and a fourth sync pattern comprising a fourth sync body and a fourth sync identification, and the third sync identification is different from the fourth sync identification" as recited in claims 1 and 27.

FIG. 16 of Fujimoto shows one cluster containing a preamble having different sync patterns SY1, SY2, SY3, and SY4, 16 sectors having different sync patterns SY0 to SY7, and SY6, and a postamble having the same sync patterns SY4. The 16 sectors store AV data, and the preamble and the postamble store predetermined data that is not AV data. Assuming *arguendo* that the 16 sectors may arguably be considered to be a "user data area" as recited in claims 1 and 27, and that each of the preamble and the postamble may arguably be considered to be an "additional data area" as recited in claims 1 and 27, it is submitted that the 16 sectors and the preamble do not provide the feature "second sync patterns that are different from the first sync patterns" as recited in claims 1 and 27 because the sync patterns SY1, SY2, SY3, and SY4 are used in both the 16 sectors and the preamble. Also, it is submitted that the 16 sectors and the postamble do not provide the feature "second sync patterns that are different from the first sync patterns" as recited in claims 1 and 27 because the sync pattern SY4 is used in both the 16 sectors and the postamble.

Sako

FIG. 4 of Sako referred to by the Examiner shows three different synchronization patterns S0-S2, and FIG. 15 of Sako referred to by the Examiner shows eight different synchronization patterns S0-S7. FIG. 3 of Sako shows one-sector information data 31 of 2072 bytes that includes a user data area 41 of 2048 bytes. The one-sector information data 31 is recorded as 14 columns of 148 bytes ( $14 \times 148 = 2072$ ), with each column begin divided into two segments, one of 85 bytes and one of 63 bytes, as shown in FIG. 2 of Sako, which shows a plurality of the one-sector information data 31.

FIG. 2 of Sako shows that a C1 parity 33 and a C2 parity 34 are added to the one-sector information data 31 of 2072 bytes to a sector 32 of 2380 bytes arranged in 14 columns of 170 bytes. A sector sync 36, which may be the synchronization pattern S2 shown in FIG. 4 of Sako; a C1 sync 37, which may be the synchronization pattern S1 shown in FIG. 4 of Sako; and an additional sync 38, which may be the synchronization pattern S0 shown in FIG. 4 of Sako, are added to the sector 32.

However, although each of the sectors 32 in FIG. 2 of Sako contains the user data area 41 shown in FIG. 3 of Sako, it is not seen where FIG. 2 discloses "an additional data area located before and/or after the user data area, and comprising second sync patterns that are different from the first sync patterns" as recited in claims 1 and 27.

FIG. 14 of Sako shows one sector of 26 frames of digital data, such as data converted from analog audio signals or video signals by A/D conversion, or computer data, having different sync patterns SY0-SY7, which may arguably be considered to be a user data area as recited in claims 1 and 27. However, FIG. 14 does not show anything that may arguably be considered to be an "additional data area" as recited in claims 1 and 27.

Conclusion—Claim Rejections Under 35 USC 102

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 1, 2, 3, 5, 6, 9, 10, and 27-29 (i.e., claims 1 and 27 discussed above and claims 2, 3, 5, 6, 9, 10, 28, and 29 depending therefrom) under 35 USC 102(b) as being anticipated by either Fujimoto or Sako be withdrawn.



Claim Rejections Under 35 USC 103

Rejection 1

Claims 1, 2, 3, 5, 6, 9, 10, 27, 28, and 29 have been rejected under 35 USC 103(a) as being unpatentable over Isozaki et al. (Isozaki) (U.S. Patent No. 6,950,603) in view of either Bluthgen (U.S. Patent No. 5,587,979) or Hirayama et al. (Hirayama) (U.S. Patent No. 5,715,356). This rejection is respectfully traversed.

It is submitted that Isozaki, Bluthgen, and Hirayama do not disclose or suggest "a user data area comprising user data and first sync patterns; and an additional data area located before and/or after the user data area, and comprising second sync patterns that are different from the first sync patterns and that enable the apparatus to distinguish the additional data area from the user data area when the computer-readable medium is used with the apparatus; wherein: the second sync patterns comprise: a third sync pattern comprising a third sync body and a third sync identification, and a fourth sync pattern comprising a fourth sync body and a fourth sync identification, and the third sync identification is different from the fourth sync identification" as recited in independent claim 1, or the similar features recited in independent claim 27.

Isozaki

With respect to Isozaki, the Examiner states as follows:

The system to Isozaki et al discloses a record medium having both user data areas, and additional data areas. They are interpreted as the video and audio data areas respectively. These data areas have their own respective sync patterns, not being the same.

The document provides for a plethora of audio channels.

FIG. 6 of Isozaki shows a track format in which video error correction blocks and audio correction blocks for one frame are recorded on 8 tracks. FIG. 7A of Isozaki shows a track format in which video error correction blocks and audio correction blocks for one frame are recorded on 6 tracks. Fig. 7B shows that each of the correction blocks is divided into a plurality of sync blocks, which have the format shown in FIG. 7C and in greater detail in FIG. 8A.

FIG. 8A shows that the sync block includes a sync pattern SYNC, an ID that identifies the sync block, a DID that contains information about the payload of the sync block, a payload DATA, and an error correction inner code PARITY. The payload may be video data as shown in FIGS. 8B and 8C; video AUX (auxiliary) data as shown in FIG. 8D; or audio data as shown in FIG. 8E.

However, it is submitted that Isozaki's video data, video AUX (auxiliary) data, and audio data are all user data. Accordingly, although Isozaki may arguably be considered to disclose a "user data area" as recited in claims 1 and 27, it is submitted that Isozaki does not disclose anything that may arguably be considered to be an "additional data area" as recited in claims 1 and 27. It is submitted that there is no basis whatsoever in Isozaki for the Examiner's interpretation that Isozaki's video data areas are "user data areas," and that Isozaki's audio data areas are "additional data areas." Accordingly, should the Examiner repeat this rejection, it is respectfully requested that the Examiner identify the basis of his interpretation.

Furthermore, assuming *arguendo* that Isozaki's video data areas may arguably be considered to be a "user data area" as recited in claims 1 and 27 as alleged by the Examiner, and that Isozaki's audio data areas may arguably be considered to be "additional data areas" as recited in claims 1 and 27 as alleged by the Examiner, it is submitted that Isozaki's video data areas and audio data areas do not have different sync patterns as alleged by the Examiner. It is not seen where Isozaki discloses any details of the sync pattern SYNC shown in FIG. 8A, or where anything whatsoever in Isozaki supports the Examiner's allegation that Isozaki's video data areas and audio data areas have different sync patterns.

For at least the foregoing reasons, it is submitted that Isozaki does not disclose or suggest "an additional data area located before and/or after the user data area, and comprising second sync patterns that are different from the first sync patterns" as recited in claims 1 and 27.

#### Bluthgen and Hirayama

With respect to Bluthgen and Hirayama, the Examiner states as follows:

Either Bluthgen/Hirayama teach in this environment, additional audio data having an appropriate id/identification component – see figures 17 a-c for instance in Hirayama et al.

It would have been obvious to modify the base system of Isozaki with the additional teachings from either Bluthgen/Hirayama et al, motivation is to provide for a plethora of audio languages on a record medium associated with the video (user) data, so as to permit a viewer/user to select the language of his own choice/desire. Such provides for an increase [*sic*] marketability of the record medium.

However, it is not seen where Bluthgen discloses "additional audio data having an appropriate id/identification component" as alleged by the Examiner. Rather, Bluthgen discloses that additional textual material is recorded in R-W channels of a subcode channel. This additional textual material may be in different languages, and may contain information such as sub menus, album, track and index title, track title list, the text of lyrics, etc. FIG. 2 shows subcode channel data bits P-W. However, it is not seen how the subcode channel data bits R-W that contain this additional textual information may be considered to be "an additional data area located before and/or after the user data area, and comprising second sync patterns that are different from the first sync patterns" as recited in claims 1 and 27 because the subcode channel data bits P-W form the sync patterns of the main data as shown in FIG. 2 and described in column 4, lines 10-12, of Bluthgen, and are not provided with sync patterns of their own.

Column 16, lines 4-9, of Hirayama, in describing FIG. 16, states that "[t]he audio (AUDIO) data is recorded in up to eight different languages AUDIO #0 through #7 (each reproduction lasts approximately one second)," and that "[e]ach piece of audio data is recorded in frames, each frame, #0, #1, and so being composed of headers (HEADERS) and data (DATA)." As described in column 16, lines 25-27, of Hirayama, FIG. 17A referred to by the Examiner shows a table of language codes that is recorded in the volume identity field (VID) shown in FIG. 4A, and shows which language is recorded in which data area.

However, it is submitted that Hirayama's audio data in different languages is simply user data in different languages. Accordingly, although the frames in which Hirayama's audio data in different languages is recorded may arguably be considered to be a "user data area" as recited in claims 1 and 27, it is submitted that Hirayama does not disclose or suggest anything that may arguably be considered to be an "additional data area" as recited in claims 1 and 27.

Furthermore, assuming *arguendo* that the frames in which Hirayama's audio data in different languages is recorded may arguably be considered to be a "additional data area" as recited in claims 1 and 27 as apparently alleged by the Examiner, it is not seen where Hirayama

discloses or suggests that this "additional data area" comprises "second sync patterns that are different from the first sync patterns [of the user data area" as recited in claims 1 and 27, or that such "second sync patterns" comprise "a third sync pattern comprising a third sync body and a third sync identification, and a fourth sync pattern comprising a fourth sync body and a fourth sync identification, and the third sync identification is different from the fourth sync identification" as recited in claims 1 and 27.

#### Conclusion—Rejection 1

For at least the foregoing reasons, it is respectfully requested that the rejection of claims 1, 2, 3, 5, 6, 9, 10, 27, 28, and 29 (i.e. claims 1 and 27 discussed above and claims 2, 3, 5, 6, 9, 10, 28, and 29 depending therefrom) under 35 USC 103(a) as being unpatentable over Isozaki in view of either Bluthgen or Hirayama be withdrawn.

#### Rejection 2

Claims 4, 7, 8, 11, 30, and 31 have been rejected under 35 USC 103(a) as being unpatentable over "the art as applied to claims 1-6, 9, 10, and 27-29 above," and further in view of Roth et al. (Roth) (U.S. Patent No. 6,188,335). This rejection is respectfully traversed.

It appears that the Examiner's reference to "the art applied to claims 1-6, 9, 10, and 27-29 above" in the statement of the rejection contains an error since art was only applied "above" to claims 1-3, 5, 6, 9, 10, and 27-29. Accordingly, it is presumed that the Examiner has actually made the following rejections.

Claims 4, 7, 8, 11, 30, and 31 have been rejected under 35 USC 103(a) as being unpatentable over either Fujimoto or Sako as applied to claims 1-3, 5, 6, 9, 10, and 27-29 in view of Roth. This rejection is respectfully traversed.

Claims 4, 7, 8, 11, 30, and 31 have been rejected under 35 USC 103(a) as being unpatentable over Isozaki in view of either Bluthgen or Hirayama as applied to claims 1-3, 5, 6, 9, 10, and 27-29, and further in view of Roth. This rejection is respectfully traversed.

It is not understood how the Examiner's explanations of the rejections of claims 5, 9, 10, 28, and 29 are relevant to the rejections of claims 4, 7, 8, 11, 30, and 31 because claims 4, 7, 8,

11, 30, and 31 do not depend directly or indirectly from claims 5, 9, 10, 28, and 29. Rather, claims 4, 7, 8, 11, 30, and 31 depend directly or indirectly from claims 1-3, 6, and 27.

In any event, it is submitted that claims 4, 7, 8, 11, 30, and 31 are patentable over Fujimoto, Sako, Isozaki, Bluthgen, Hirayama, and Roth for at least the same reasons discussed above that claims 1-3, 6, and 27 from which claims 4, 7, 8, 11, 30, and 31 directly or indirectly depend are patentable over Fujimoto, Sako, Isozaki, Bluthgen, and Hirayama. Accordingly, it is respectfully requested that the rejection of claims 4, 7, 8, 11, 30, and 31 under 35 USC 103(a) as being unpatentable over either Fujimoto or Sako as applied to claims 1-3, 5, 6, 9, 10, and 27-29 in view of Roth be withdrawn, and that the rejection of claims 4, 7, 8, 11, 30, and 31 under 35 USC 103(a) as being unpatentable over Isozaki in view of either Bluthgen or Hirayama as applied to claims 1-3, 5, 6, 9, 10, and 27-29, and further in view of Roth be withdrawn.

#### Patentability of New Claims 36 and 37

It is submitted that Fujimoto, Sako, Isozaki, Bluthgen, Hirayama, and Roth do not disclose or suggest the feature "wherein each of the first sync body, the third sync body, and the fourth sync body does not satisfy the run-length limited (RLL) (d, k) code having the minimum constraint of d and the maximum constraint of k" recited in new dependent claims 36 and 37, particularly in combination with the feature "wherein . . . each of the first sync identification, the third sync identification, and the fourth sync identification satisfies a run-length limited (RLL) (d, k) code having a minimum constraint of d and a maximum constraint of k" recited in claim 11 from which new claim 36 depends, and the similar features recited in claims 30 and 31 from which new claim 37 depends.

For at least the foregoing reasons, it is submitted that new claims 36 and 37 are patentable over Fujimoto, Sako, Isozaki, Bluthgen, Hirayama, and Roth, and an indication to that effect is respectfully requested.

#### Conclusion

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

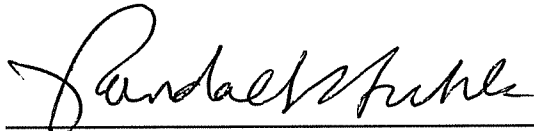
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this paper, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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Attachments